



Quick Glance

- **Human Animal Conflict: Kerala's 45-Day Conflict Mitigation Campaign (Sep–Oct 2025).**
- **PM inaugurates India's first bamboo-based ethanol plant.**
- **Tehran Hosts Maiden India–Iran–Uzbekistan Trilateral.**
- **Pendency Continues to Plague the Supreme Court.**
- **Sliver of Hope – Saltwater Crocodile Survey in Sundarbans.**



Environment

Kerala's 45-Day Conflict Mitigation Campaign (Sep–Oct 2025)

Context

- ◆ To implement a three-phase resolution model for human-wildlife conflict across ~300 panchayats (30 being critical hotspots).

Key Details

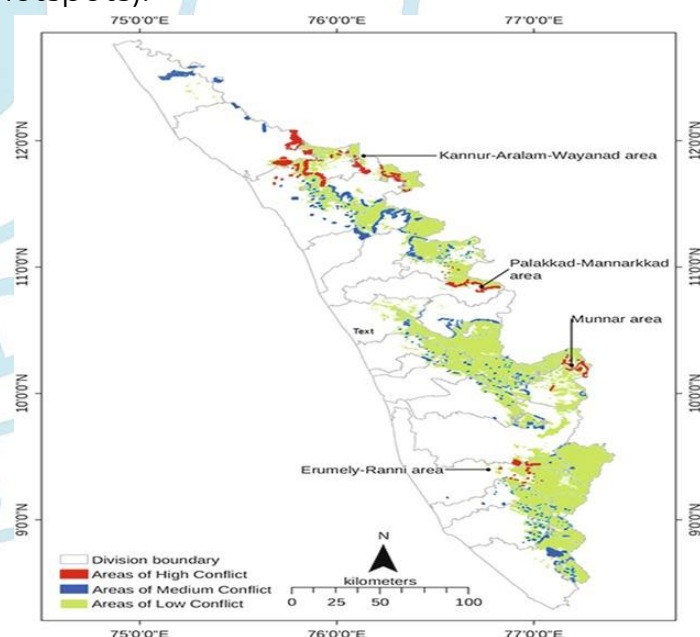
Phase 1

- ◆ Establishment of help desks at forest range and panchayat offices.
- ◆ Grievance redressal: crop loss, safety concerns, delayed compensation.
- ◆ Public participation via written complaints and drop-boxes.

Phase 2

- ◆ District-level committees led by Collectors & MLAs.
- ◆ Escalation of unresolved issues from Phase 1.

Phase 3





- ◆ Persistent issues taken up at state level.
- ◆ Multi-stakeholder involvement (Ministers, MLAs, Department Heads).
- ◆ State to inform Centre for national-level policy support.

Significance

- ◆ First-of-its-kind structured and time-bound conflict resolution model.
- ◆ Focus on community engagement, data-driven decision-making, and inter-departmental coordination.
- ◆ Potential model for replication across forested states in India.

Nature of Human Wildlife Conflict in Kerala:

- ◆ Common problems: crop damage, delayed compensation, threat to life/safety, property damage.
- ◆ Certain areas are hotspots, indicating spatial clustering of conflicts.
- ◆ Conflict is frequent in forest fringe villages.

Need to Address the Issue

- ◆ Prevent economic losses and livelihood insecurity among farming/forest adjacent communities.
- ◆ Protect wildlife populations and reduce retaliatory killings.
- ◆ Improve social trust and governance by ensuring responsive grievance redressal systems.

Recent Case Studies

1. Udanti Sitanadi Tiger Reserve, Chhattisgarh – Solar Pumps for Water Access

- ◆ To reduce wildlife (animals) entering villages in search of water, the reserve has installed solar powered water supply systems.

Benefit: ensures availability of water within wildlife habitat, reduces animals' need to stray into human areas. Also cost efficient and eco friendly

2. Kerala-Human Elephant Conflict

- ◆ Kerala has among the highest incidence of human elephant attacks in India—about 50 human deaths annually and hundreds injured
- ◆ Over ₹79.14 crore spent in six years on compensation (for crop damage, cattle loss, human injury/death)



Way Forward

- ◆ Water scarcity drives many conflict incidents (animals enter farmlands/villages) → provisioning water in habitat can reduce conflict.
- ◆ Scientific & data driven approaches (e.g. telemetry, predictive models, mapping) are effective tools.
- ◆ Seasonality & geography (rain, forest fringe, corridors) matter: planning must account for when animals move the most.
- ◆ Local community involvement + real time response mechanisms are important in managing perceptions and reducing killings or retaliation.



SYLLABUS

Syllabus Mapping:

- GS Paper III – Environment Conservation, Biodiversity, HWC mitigation
- GS PAPER II- Governance-Role of local bodies, decentralised grievance systems

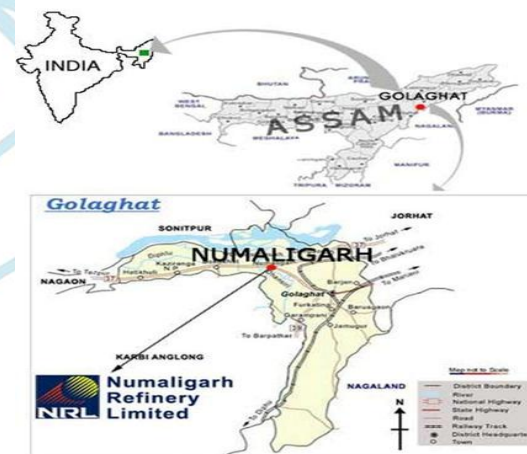


Environment

PM inaugurates India's first bamboo-based ethanol plant

Context

- ◆ On September 14, 2025, Prime Minister Narendra Modi inaugurated India's first bamboo-based bioethanol plant and laid the foundation stone for a polypropylene plant in Golaghat, Assam. This marks a significant move in India's transition towards green energy and industrial development in the Northeast





Key Details

- ◆ Location: **Numaligarh Refinery, Golaghat, Assam**
- ◆ Projects: Bioethanol Plant by Assam Bio-Ethanol Pvt. Ltd. (ABEL)
- ◆ **Polypropylene Plant to support plastic and packaging industries**
- ◆ Investment: Rs. 6,300 crore (including infrastructure and health projects in Darrang)
- ◆ **Support to Farmers:**
 - Promotion of bamboo cultivation
 - Direct procurement by government to ensure market security
 - Historical Note: Previous legal restrictions under Indian Forest Act classified bamboo as a tree. Recent declassification helped tribal and rural economies.

Significance of Ethanol Blending

- ◆ Reduces dependency on imported fossil fuels..
- ◆ Promotes cleaner combustion and air quality.
- ◆ Supports India's E20 target: 20% ethanol blending in petrol by 2025-26.
- ◆ Utilizes 2G biofuel technology using bamboo and agricultural waste.
- ◆ Enhances rural livelihoods through bamboo-based agro-industrial economy.

Challenges

- ◆ Ensuring steady bamboo supply.
- ◆ Lack of farmer awareness and training on commercial bamboo cultivation.
- ◆ Logistics and transportation hurdles in rural regions.
- ◆ High capital costs of 2G biofuel plants.
- ◆ Ethanol pricing and procurement policies still evolving.



Way Forward

- ◆ Promote farmer-industry linkage with MSP-like procurement for bamboo.
- ◆ Capacity building via Krishi Vigyan Kendras (KVKs).
- ◆ Develop cluster-based bioenergy parks.
- ◆ Integrate bamboo economy with Skill India and Start-up India.
- ◆ Use Viability Gap Funding (VGF) for green projects.

Background of Ethanol Blending in India.

- ◆ **Launched:** 2003 Ethanol Blending Programme (EBP)
- ◆ **Revised Targets:**
 - 10% achieved in 2022
 - 20% by 2025-26 (E20)
- ◆ **Categorization:**
 - ◆ **1G ethanol:** From food crops like sugarcane, maize
 - ◆ **2G ethanol:** From lignocellulosic biomass (e.g., bamboo, agri waste)



SYLLABUS

Syllabus Mapping:

- GS Paper III – Economy, Environment.



International Relations

Tehran host Maiden India-Iran-Uzbekistan Trilateral.

Context

- ◆ India, Iran and Uzbekistan held their first trilateral dialogue in Tehran focusing on connectivity and regional cooperation.

Key Details

- ◆ Emphasis on Chabahar Port as a gateway to Central Asia.
- ◆ Uzbekistan, a landlocked country, seeks access to the Indian Ocean via Chabahar.
- ◆ Agenda included trade, energy, Afghanistan, counter-terrorism, and SCO coordination
- ◆ India has signed a 10-year agreement to operate Shahid Beheshti terminal at Chabahar.

Significance

- ◆ Strengthens India's Connect Central Asia Policy
- ◆ Counters China's influence through Gwadar Port and BRI projects.
- ◆ Integrates with INSTC, boosting Eurasia trade.
- ◆ Provides India alternate route to Afghanistan bypassing Pakistan.

Way Forward

- ◆ Speedy completion of port and rail link projects.
- ◆ Broaden trilateral into wider regional connectivity framework.
- ◆ Link with India's energy security and Central Asia strategy.





Polity & Governance

Pendency continue to plague Supreme Court.

Context

- ◆ Despite digitisation efforts, pendency of cases in the Supreme Court remains very high.

Key Details

- ◆ 81,483 cases pending (Aug 2025); ~50,000 at admission stage.
- ◆ Across all courts in India: **~5 crore cases pending.**
- ◆ **Judge-to-population ratio: ~21 per million vs Law Commission's recommendation of 50.**

Landmark observations:

- ◆ **Anil Rai v. State of Bihar (2001)** – Delay violates **Article 21**.
- ◆ **Imtiyaz Ahmad v. State of UP (2012)** – called for framework to fill vacancies.

Significance

- ◆ Delays violate Article 21 (Right to Speedy Justice).
- ◆ Weakens public trust and rule of law.
- ◆ Hampers ease of doing business (contract enforcement).
- ◆ Key constitutional cases remain unresolved.

Way Forward

- ◆ Fill judicial vacancies expeditiously.
- ◆ Create All India Judicial Service
- ◆ **Invest in e-Courts, AI-driven case management.**
- ◆ Promote ADR and tribunals for non-core cases.



SYLLABUS

Syllabus Mapping:

- GS II: Polity – Judiciary & Justice Delivery.
- Prelims: Articles 21, 32, 136; NJDG; e-Courts project.



Environment

Sliver of hope-Salt water crocodile survey in Sundarbans.

Context

A new survey shows stable saltwater crocodile numbers in the Sundarbans despite ecological pressures.

Key Details

- ◆ **Saltwater Crocodile** (*Crocodylus porosus*) – **world's largest reptile.**
- ◆ Distribution: Sundarbans (WB), Bhitarkanika (Odisha), Andamans & Nicobar.
- ◆ IUCN Status: Least Concern; CITES Appendix.
- ◆ Conservation programs: Project Crocodile (1975), **Bhagabatpur Crocodile Project (WB).**



Significance

- ◆ Apex predator crucial for mangrove ecosystem health.
- ◆ Eco-tourism potential (Odisha & Sundarbans).
- ◆ Case study of species revival in India.
- ◆ **Ecological Significance:**
 - **Saltwater crocodiles** are listed under **Schedule I** of the Wildlife (Protection) Act, 1972.
 - As **apex predators**, crocodiles regulate prey populations and clean up water systems by removing carcasses.



- Their presence signals a **functioning food web** in the mangroves despite heavy human and climatic pressures.

Way Forward

- ◆ Reduce human–crocodile conflict through awareness.
- ◆ Expand monitoring & research in climate-stressed regions.



SYLLABUS

Syllabus Mapping:

- GS III: Environment – Biodiversity conservation.
- Prelims: Project Crocodile, distribution of crocodile species in India (Saltwater, Mugger, Gharial).
- Case Study: **Bhagabatur project as conservation model.**



Practice Corner

1. With reference to **Saltwater Crocodiles (*Crocodylus porosus*)** in India, consider the following statements:
1. They are the largest living reptiles in the world.
 2. Their natural distribution in India includes Sundarbans, Bhitarkanika and Andaman & Nicobar Islands.
 3. They are listed as *Endangered* in the IUCN Red List.

Which of the above statements is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3



2. Consider the following pairs:

Conservation Programme	Associated Species
Project Crocodile (1975)	Saltwater Crocodile
Bhagabatpur Project (WB)	Crocodile breeding
Project Hangul	Snow Leopard

How **many** pairs given above are correctly matched?

- (a) One only
- (b) Two only
- (c) All three
- (d) None

3. Recently, a survey in the Indian Sundarbans reported stable numbers of Saltwater Crocodiles. In this context, which of the following best describes their ecological role?

- (a) They help in pollination of mangroves.
- (b) They serve as apex predators indicating ecosystem balance.
- (c) They primarily regulate fish migration in creeks.
- (d) They prevent soil salinisation in estuarine areas.

4. Which of the following is/are potential threats to the long-term survival of Saltwater Crocodiles in the Sundarbans?

- 1. Shrinkage of mangrove habitat due to sea-level rise.
- 2. Human–crocodile conflict in fringe villages.
- 3. Illegal hunting for skin and body parts.

Select the correct answer using the code below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

5. Consider the following protected areas in India:

- 1. Bhitarkanika National Park
- 2. Sundarbans Biosphere Reserve
- 3. Point Calimere Wildlife Sanctuary

Which of the above are known habitats of saltwater crocodiles?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

6. With reference to **Chabahar Port**, consider the following statements:

- 1. It is located on the Gulf of Oman in southeastern Iran.
- 2. It is jointly developed by India, Iran and Afghanistan under the Trilateral Agreement of 2016.



3. It provides India direct access to Central Asia by bypassing Pakistan.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

7. Consider the following pairs:

Port / Corridor	Country
Gwadar Port	Iran
Chabahar Port	Iran
Hambantota Port	Sri Lanka

How many pairs given above are correctly matched?

- (a) One only
- (b) Two only
- (c) All three
- (d) None

8. The International **North-South Transport Corridor (INSTC)**, sometimes seen in the news, connects India with which of the following regions?

- (a) Central Asia and Europe via Iran and Russia
- (b) Southeast Asia via Myanmar and Thailand
- (c) Africa via Indian Ocean littorals
- (d) South America via Atlantic sea routes

9. With reference to **Uzbekistan's interest in Chabahar Port**, consider the following statements:

- 1. Uzbekistan is a landlocked country in Central Asia.
- 2. It seeks access to the Indian Ocean through Chabahar.
- 3. Uzbekistan shares a direct border with Iran.

Which of the above statements are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

10. Which of the following correctly explains the **strategic significance of Chabahar Port for India**?

- 1. It integrates with the International North-South Transport Corridor (INSTC).
- 2. It offers an alternative trade route to Afghanistan bypassing Pakistan.
- 3. It helps counter China's presence in Gwadar Port.

Select the correct answer using the code below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3